

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Sosa, et al.

Serial No.: 10/674,224

Confirmation No.: 2510

Filed: September 29, 2003

For: High Impact Polystyrene and Process  
for Preparing Same

§ Atty. Dkt. No.: COS-857/864

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§ Group Art Unit: 1711

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§ Cust. No.: 25264

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§ Examiner: Nutter

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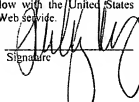
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Dear Honorable Commissioner:

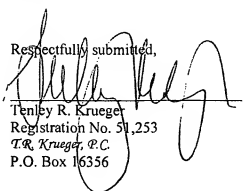
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TRANSMITTAL LETTER

In connection with the above identified application, Applicants respectfully resubmit the following in response to the Notice of Non-Compliant Appeal Brief dated March 30, 2009:

1. The Notice states that all claims and their status have not been listed. Appellants respectfully disagree. In addition, the Notice states that Claims 1 and 25 must show where support is found in the Specification. Appellants have included the Status of Claims and Summary of Claims Sections herewith.

Respectfully submitted,

  
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### **Status of Claims**

Claims 1-24 were originally filed in the application. Claims 25-26 were added in Response to an Office Action dated September 24, 2004. Claims 10-11 were cancelled and Claim 27 was added in Response to an Office Action dated March 31, 2005. Accordingly, Claims 1-9 and 12-27 are pending in the application. Claims 1, 3-6, 8-9, 13-20, 22 and 24-27 stand rejected under 35 U.S.C. §102(b). Claims 1-2, 3-9, 12-15, 21-23, 25 and 27 stand rejected under 35 U.S.C. §103(a). The rejections of the pending claims are appealed.

The Examiner indicated that the subject matter of claim 10 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." *See*, Final Office Action at page 6. Accordingly, Applicants submitted claim 10 in independent form including all of the limitations of the base claim (*i.e.*, claim 1) in response thereto (claim 27). *See*, Response dated June 16, 2005, claim 27. However, the Examiner rejected such claim upon entrance of the amendment. *See*, Office Action dated April 3, 2006.

### **Status of Amendments**

No claim amendments were submitted in response to the Office Action dated April 3, 2006. The Final Office Action was withdrawn in response to the Appeal Brief filed on October 27, 2005.

### **Summary of Claimed Subject Matter**

High Impact Polystyrene (HIPS) processes generally include balancing properties, such as bulk viscosity, chemical grafting, rubber and polystyrene molecular weights and shear rates in order to prepare HIPS having a desired particle size and morphology. For example, it is generally considered desirable to formulate toward a narrow particle size distribution and large, regular inclusions in order to obtain the highest rubber phase volume. *See*, Specification, at least page 8, lines 13 to 18. Unfortunately, as the level of grafting decreases, polystyrene inclusions can decrease in size, therefore increasing the overall number of particles per unit volume. *See*, Specification, at least page 8, lines 19 to 27.

Accordingly, independent Claim 1 recites a process for preparing a high impact polystyrene comprising admixing a rubber and styrene monomer in the presence of at least two polymerization initiators and polymerizing the styrene wherein at least one of the at least two polymerization initiators is a grafting initiator and at least one of the at least two polymerization initiators is a non-grafting initiator. *See*, Specification, at least page 6, paragraph 23 at lines 10 to 13, page 5, paragraph 21 at lines 1 to 3, page 5, paragraph 20 at lines 1 to 4 and page 8, paragraph 29, lines 1 to 9.

Independent claim 25 recites a process for preparing a high impact polystyrene comprising admixing a rubber and styrene monomer in the presence of at least two polymerization initiators selected to optimize a high impact polystyrene morphology, wherein at least one of the at least two polymerization initiators is a grafting initiator and at least one of the at least two polymerization initiators is a non-grafting initiator and polymerizing the styrene to form the high impact polystyrene. *See*, Specification, at least page 6, paragraph 23 at lines 1 to 10 and page 6, paragraph 22 at lines 1 to 3.

Such a process unexpectedly may increase the rubber particle size while maintaining the desired polymer morphology. *See*, Specification, Examples (*e.g.*, page 10, paragraph 37 at lines 7 to 11, Figure 3, numbers 301 and 302 and Figures 4-7 and Figures 8-9 for comparison.)

Independent Claim 27 recites a process for preparing a high impact polystyrene comprising admixing a rubber and styrene monomer in the presence of at least two polymerization initiators and polymerizing the styrene wherein at least one of the at least two polymerization initiators is a grafting initiator and at least one of the at least two polymerization initiators is a non-grafting initiator selected from the group consisting of 2,2'-azobis(isobutyronitrile), 2,2'-azobis(2-methylbutyronitrile), lauroyl peroxide, decanoyl peroxide, and mixtures thereof. *See*, Specification, at least page 6, lines 1-6.

Dependent claim 26 recites that the morphology includes honeycomb structures. *See*, Specification, at least page 8, paragraph 29 at lines 2 to 7.